

We claim:

1. A method of treating heart failure in an individual comprising preventing cleavage of serum response factor (SRF) in at least one cardiac cell of the individual.
2. The method of claim 1, wherein said method is further defined as administering a therapeutically effective amount of a caspase inhibitor in a pharmaceutically acceptable composition.
3. The method of claim 2, wherein the caspase inhibitor is insulin-like growth factor, growth hormone, Akt, growth hormone releasing hormone, baculovirus p35, cowpox virus CrmA, Flip, acetyl-DEVD-aldehyde, or a mixture thereof.
4. A method of treating heart failure in an individual, comprising administering to the individual a therapeutically effective amount of an uncleavable SRF.
5. A method of diagnosing cardiac disease in an individual, comprising the step of identifying cleavage of SRF in at least one cell from a sample from said individual.
6. The method of claim 5, wherein the sample is from a tissue of the individual.
7. The method of claim 6, wherein the tissue is cardiac tissue.
8. The method of claim 7, wherein the cardiac tissue is ventricular tissue.
9. The method of claim 5, wherein the identifying step is further defined as

obtaining a sample from an individual suspected of having cardiac failure; and

comparing levels of cleaved SRF in said sample with a known control reflective of levels of cleaved SRF in non-failing cardiac tissue, wherein when said sample comprises elevated levels of cleaved SRF compared to said control, said individual suspected of having cardiac failure has a positive diagnosis for cardiac failure.

10. The method of claim 9, wherein the identifying step comprises immunoblot analysis for said cleaved SRF.
11. The method of claim 10, wherein the immunoblot analysis comprises an antibody against a region of SRF.
12. The method of claim 11, wherein the region of SRF is an N-terminal region or a C-terminal region.
13. The method of claim 12, wherein the N-terminal region comprises at least a portion of amino acid sequence encoded by the first coding exon of a SRF polynucleotide.
14. The method of claim 13, wherein the N-terminal region comprises SEQ ID NO:5.
15. The method of claim 5, wherein said cardiac disease is further defined as cardiac failure.
16. A polyclonal antiserum, antibodies of which bind immunologically to a polypeptide comprising an N-terminal region of serum response factor.
17. The antiserum of claim 16, wherein the serum response factor polypeptide comprises SEQ ID NO:5.
18. The antiserum of claim 16, wherein antibodies of said antiserum are bound to a support.

19. A method of treating cardiac disease in an individual, wherein the disease is associated with cleavage of SRF in at least one cell of the individual, comprising the step of administering to the individual a therapeutically effective amount of a pharmaceutically acceptable composition comprising a caspase inhibitor.
20. The method of claim 19, wherein the caspase being inhibited is caspase 3, caspase 7, or both.
21. The method of claim 19, wherein the administering step is further defined as administering a caspase inhibitor to the individual, wherein the caspase inhibitor inhibits cleavage of serum response factor (SRF).
22. The method of claim 19, wherein said caspase inhibitor is insulin-like growth factor, growth hormone, Akt, growth hormone releasing hormone, baculovirus p35, cowpox virus CrmA, Flip, acetyl-DEVD-aldehyde, or a mixture thereof.
23. The method of claim 19, wherein said method further comprises an additional therapy.
24. The method of claim 23, wherein said additional therapy is drug therapy, device therapy, gene therapy, nutritional and/or exercise therapy, or a combination thereof.
25. The method of claim 24, wherein said device therapy comprises administration of a left ventricular assist device to the individual.
26. A method of treating cardiac disease in an individual, wherein the disease is associated with cleavage of SRF, comprising the step of administering to the individual a therapeutically effective amount of a pharmaceutically acceptable composition comprising an anti-apoptotic composition.

27. The method of claim 26, wherein said anti-apoptotic composition is phorbol myristate acetate.
28. A method of treating cardiac disease in an individual, comprising inhibiting activity of a dominant negative form of SRF in at least one cell of the individual.
29. The method of claim 28, wherein said dominant negative form is a fragment of SRF resulting from proteolytic cleavage of SRF.
30. The method of claim 29, wherein the proteolytic cleavage is from a caspase.
31. The method of claim 30, wherein the caspase is caspase 3 or caspase 7.
32. A method of treating cardiac disease in an individual, wherein the disease is associated with cleavage of SRF, comprising the step of administering to the individual a therapeutically effective amount of a pharmaceutically acceptable composition comprising growth hormone releasing hormone.
33. The method of claim 32, wherein the cleavage of SRF results in apoptosis.
34. A method of preventing cardiac disease in an individual, comprising inhibiting cleavage of serum response factor in a cardiac tissue of the individual.
35. A method of preventing cardiac disease in an individual, comprising inhibiting activity of a dominant negative form of SRF.
36. A kit for the treatment of cardiac failure in an individual comprising elevated levels of cleaved SRF, comprising a caspase inhibitor, an uncleavable SRF, or a combination thereof.

37. A method of treating heart failure in an individual, comprising the steps of:

providing the individual, wherein said heart failure in the individual is the direct or indirect result of cleavage of SRF in at least one cardiac cell of the individual; and

administering to the individual a therapeutically effective amount of a SRF inhibitor, a caspase inhibitor, or both.

38. A method of preventing or delaying apoptosis of a cell, comprising the step of inhibiting SRF in said cell, wherein said inhibiting is further defined as:

inhibiting activity of SRF in said cell;

inhibiting expression of SRF in said cell;

inhibiting cleavage of SRF in said cell;

or a combination thereof.

39. The method of claim 38, wherein said cleavage is by a caspase.

40. A method of treating heart disease in an individual, comprising:

providing the individual, said heart disease the direct or indirect result of cleavage of SRF in at least one cardiac cell of the individual; and

preventing and/or inhibiting cleavage of SRF.

41. The method of claim 40, wherein said preventing and/or inhibiting cleavage of SRF comprises the step of administering to the individual a therapeutically effective amount of a SRF inhibitor.